



MEETING THURSDAY 4th MARCH 7:30 pm Australian National University Meeting details back page

Birdwatch 2 Another Birds Eye View of Revegetation Nicki Taws - Project Manager Greening Australia Capital Region

Greening Australia has been studying birds in revegetation on farms for almost a decade. The first comprehensive survey was undertaken in 2000-01 on 132 sites across the Capital Region including 97 revegetated sites, 25 remnants and 10 paddocks. Birdwatch 1 found 110 bird species using a range of direct seeded and tubestock planted sites, with the larger, wider and older sites containing the greater number of bird species.

Eight years on, the trees have grown taller, some shrubs have died, others have regenerated, leaf litter and fallen branches have accrued, and some native grasses and forbs have recovered. Birdwatch 2 surveyed the birds again in Spring 2008 and Autumn 2009, and the results have been compared against the findings from almost a decade ago.

Nicki will tell us more about the surveys Greening Australia carried out in Birdwatch 1 and Birdwatch 2.

A Canberra street. Photo M Kalms

Next month, 1st April - Dung Beetles - Speaker John Freehan

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Outing - 20th March - Pinnacle Nature Reserve

Nicki Taws will follow her talk with a walk at The Pinnacle Nature Reserve on Saturday the 20th of March at 8am to look at some of the plantings. We will meet at the corner of De Salis Street and Springvale Drive. The walk will be 1-2 hours. Bring

your binoculars, walking shoes etc. Followed by morning tea at a near by cafe. Contact Helen Dowsett on [redacted] if you have any questions.

BATS IN THE LOCAL REGION - MICHAEL PENNAY'S TALK

by Rosemary Blemmings

We were aided in our "discovery" of Michael Pennay by Dr Chris Tidemann who had given FNAC a talk on *The Secret Life of Bats* in 1994. Michael concentrated on descriptions of the 18 locally occurring bat species but simultaneously revealed many 'secrets' and sometimes bizarre facts about these rarely seen animals.

As President of the 300-member Australasian Bat Society Michael rapidly shared his enthusiasm for bats and revealed that, in the ACT, bats comprise 40% of the mammalian diversity and are therefore the dominant mammal group. 80% of Australian bats are endemic. 18 species can be found locally and few of these roost in caves as we've probably come to expect. Wee Jasper is a hot-spot for bats though most are found in caves other than those we've visited. Many microbats roost in tree hollows or amongst the foliage. Felling mature trees is a major threatening process for bat populations.

Some of the other notes I made included:

Cats can hear many species of bats. Most of their noises are inaudible to humans. Some can fly quite long distances, 60km out of the Wee Jasper Caves, for example.

Warming associated with climate change will adversely affect many bat species through heat-stress.

Michael showed us a bat-detector using ultrasound. We passed-round a radio-transmitter designed for bats weighing .135gm. Harp traps and mist nets are used.

We weren't lucky in our short walk onto ANU campus but did detect an insect's presence. At least we saw the potential of the infra-red detector.

Some one-liners about our local species:

GREY-HEADED FLYING FOX: This species is observable in the ACT as I write. Many were killed by 43 degree heat in Victoria.

LITTLE RED FLYING FOX: Michael noted their habit of roosting in Stage 88's pine trees and flying to Pialligo to feed on fruit.

GOULD'S WATTLED BAT: Is the most common & can roost in roofs. They have a 12-15 cm wingspan.

WHITE-STRIPED MASTIFF BAT: Has a weird call, a "tink" noise. They fly high above the canopy.

LESSER LONG-EARED BAT: An almost Australia-wide, low-flying species. Sometimes caught by cats.

SOUTHERN FOREST BAT:}

LARGE FOREST BAT: } These are the SBB (small, brown birds) of bat species!

CHOCOLATE WATTLED BAT: They're related to Gould's & are found along river systems & are woodland dwellers. Relatively common & found at Mulligans Flat.

UNDESCRIBED MASTIFF BATS SPECIES 2 & SPECIES 4. SPECIES 6 described in 2009

FISHING BAT: They have special toes to scoop up minnows and beetles which they eat on the wing.

FALSE PIPISTRELLE: Found east of Queanbeyan in cool temperate forests such as the Brindabellas & elsewhere on the Tablelands.

GREATER BROAD-NOSED BAT: Quite a savage beast especially against other bats. 10cm long & weighing 30-40 grams.

EASTERN BROAD-NOSED BAT

EASTERN HORSESHOE BAT: There's a horse-shoe shaped structure on their noses. They call through their noses. One of the two cave specialists. Relatives in the tropics.

EASTERN BENT-WING BAT: One of the Wee Jasper species. They have an extra-long wing and fore-finger digit.

YELLOW-BELLIED SHEATH-TAILED BAT: A seasonal vagrant eating large insects, moths, beetles. They hawk for insects 1-5m above the canopy.

GOOGLE FOR MORE DETAILS OF BAT SPECIES and let's all be more observant after-dark!

Sue Churchill's *Australian Bats* is recommended.





A VERY RARE ENCOUNTER Quoll sighted in Charnwood!

Media release from Parks, Conservation and Lands



Rare sight: the spotted-tailed quoll was found up a tree in Charnwood last week.
(ACT Parks Conservation and Lands)

It is not a Tasmanian Tiger but close enough. Spotted-tailed Quolls are a very uncommon sight in the ACT with only about 12 verified sightings since the 1950s, so imagine the surprise when wildlife rangers from ACT Parks, Conservation and Lands (PCL) were called out to a sighting of one in suburban Charnwood.

“We were met by a very large male Quoll sitting quite happily in a tree over a laneway. Charnwood certainly isn’t your typical Quoll habitat, as they prefer forested areas with lots of rocky outcrops and fallen timber,” said Daniel Iglesias, District Manager, PCL.

“We believe the Quoll ventured from Namadgi to Charnwood, possibly looking for food. In the wild they are known to eat small mammals, possums, gliders and rabbits, but they have also been known to raid chicken coups.

“Upon encountering the beautiful creature and with some gentle persuasion, Rangers netted and transported the Quoll to the Tidbinbilla Nature Reserve where the ACT Government Vet gave it a clean bill of health.

“The next day, Rangers were able to release the Quoll into a suitable area of the Namadgi National Park.”

Mr Iglesias said that while it was rare to encounter a Quoll, it was not unusual for the animal to travel many hundreds and even thousands of hectares.

He said the encounter would be treasured and he was relieved to know that the ACT is still home to this exquisite animal.

“It is heartening to see that there are still areas in the ACT that support Quolls. Quoll numbers have been dramatically reduced as a result of habitat clearing, competition for food with foxes, and direct killing by humans,” said Mr Iglesias.

“If you are ever lucky enough to spot a Quoll please call Canberra Connect on 13 22 81 with the details.”

A fact sheet on the rare animal is available on the TAMS website: http://www.tams.act.gov.au/_data/assets/pdf_file/0005/154364/Spotted-tailed_Quoll.pdf

Producers/Editors Note: Video footage and photographs of the animal being released back into the wild are also available.

Eastern Whipbird at Molonglo Gorge



This little guy has been very elusive since I had heard that he was around the Molonglo Gorge car park. I finally found him earlier this afternoon (29 November 2009) (between showers) down in the lower river car park area.

Lindell

I know this is a bit ‘old’, but it is still interesting.

If you have seen anything of natural history interest, send me an email and I will include it in FieldNatter. Editor [margaret\(at\)ecospirit.com.au](mailto:margaret(at)ecospirit.com.au)

Part II - PERU: THE DOWNHILL PLUNGE INTO THE CLOUD FOREST

An adventure by Horst and Kay Hahne

We left the dry, brown, west side of the high Peruvian Andes behind us, after rising to nearly 4000m at the Pass. Occasionally we get a glimpse of snow on those distant peaks that rise above the 5000m snowline. Up this high it is easy to forget Peru is close to the Equator. We have a new bus driver and a different bus which is not new; it rattles, the tires are nearly bald, it has an extremely high first step with no handrails, so just getting into it is a big effort.

The bus driver was no more than 5 feet tall, but wiry and he could man-handle that bus. We spent two days driving down and down the winding, narrow, rough, gravel road, with many blind horseshoe bends. He tooted the horn before negotiating the sharp bends, thank goodness. Ever negotiated a one-way tunnel through rock with an S-bend? We did. When we met a truck our driver often had to stop and back up closer to the edge. Guardrails were never seen, just the side of the road with perhaps a 500m drop off into oblivion. I couldn't look. I rather believe in that saying "what you don't know won't hurt you".

The scenery, however, was magnificent. We entered the cloud forest on the green eastern slopes where the rainfall is much greater. As we descend, we went through different suites of vegetation and bird life. At the entrance to the larger Manu Biosphere Reserve we were greeted by a cool, misty fog, which didn't keep us from spying our first Great Thrush, which reminded me of an obese European Blackbird.

The first evening, 4 Oct, we stayed at a Research Field Station. Four bunks to a room so it was share with friends. Our cook served us the most delicious, smooth, creamy, sweet chocolate porridge for our first breakfast. He earned brownie points from me! He donned his white coat and tall hat trimmed in red nearly every evening, just like in a professional restaurant, plus his fare was artfully presented. He kept us well fed and none of us ever got sick to the tummy. Three cheers for the cook!



Orchids
Photo Horst Hahne

The birdos got up early for a walk along the road. The plant people opted for a later Orchid Walk. It is great to have some choices when circumstances allow. Later we all walked down a steep, narrow and winding trail, spying many small to medium orchids in bloom and also some

bromeliads (many of these epiphytes grow on trees, high among the branches), beautiful lacy fern leaves, tall tree ferns *Cyathea*, club moss, lichens, and the now common *Cecropia* tree with its huge palmate leaves, *Piper* or Candela with candle-like, erect, flowering structures and Ant-associated Melastome (*Maieta* sp) with their unique leaves – parallel cross veins running perpendicular to long veins. In parts the path was so steep that I ignored Ian's earlier two-pronged warning: "(1) pedestrians have no right of way in the cities/villages, and (2) do not touch anything in the rainforest/jungle". I needed to occasionally hang on to a root, sapling, small branch or rock in order to negotiate the path safely. I did check for ants first. The trail wound down and down and I began to panic – how would I ever walk back up? What relief to be told the bus would pick us up at the bottom!



Blue polka-dot moth on tree trunk. Don't know the name.
Photo Horst Hahne

One more day of descent, and now we begin to breath much easier and puff less. The altitude is much more bearable, but from now on we will have no electricity. The ambience in our rooms at night is candlelight and/or torchlight. We have to remember to get out clothes for the next day in the daylight. It is amazing how dark and cavernous a bag looks when you are searching for a wayward item with a torch. The dim light keeps us from noticing the stray insects which we hope will be kept out by tucking our mosquito netting in firmly around our single bed mattresses. Again "what you don't see you won't worry about"! We are at the quiet Acca Rainforest Lodge, near a Cock-of-the-Rock lec.



Male Andean Cock-of-the-Rock
national bird of Peru.
Photo Horst Hahne

A morning walk to the lec scores us several bright red, black and grey Andean Cock-of-the-Rock males displaying for the attention of an out-of-sight female. This is Peru's national bird. Then on up the road for a tremendously productive morning of birdwatching. The brightly coloured Tanagers were spectacular: Yellow-throated, Orange-eared, Golden-eared, Saffron-crowned

and Silver-beaked. As well there was a woodpecker, warbler, flycatcher, barbet, kingbird, siskin and bush-finch. There were hummingbirds aplenty in the flowers and feeders just outside the dining room.



Violetear on feeder

I think there was a collective sigh of relief once we gained level ground on either side of us, with little villages and fields. We stopped to visit a Coca plantation. This is not chocolate - that comes from the Cacao Tree *Theobroma cacao*. We had been drinking the mild and nice flavoured Coca leaf tea to help with our high altitude problems. Some tried chewing the leaves as well, which acts as a mild stimulant, suppresses hunger, thirst, pain and fatigue. The natives do this regularly, with a bit of lime. This is the plant *Erythroxylum coca* from which cocaine is produced! And here was a small plantation before our very eyes. 20,000 hectares are legal in Peru for locals to use for tea and chewing. However, there are 80,000 hectares – the extra being for the drug dealers. The biggest grower is Columbia, followed by Peru, Bolivia then Ecuador. Some coffee and mandarines are grown, but these are only harvested once a year. Coca leaves are picked every 3 months and a plant may live 50 years. A farmer can charge US\$12,000 each time a plane lands on his little landing strip. So of course he can make a better living by selling cocaine – especially since the dealers pay the farmers in advance for the next crop, and the police turn a blind eye. Well, what would you choose to do if you were a poor farmer struggling to make a living for your family??

It was nearly 2:00 when we stopped at a small village and negotiations were made for us to sit inside a small café and eat the lunch provided by our own cook. This happened several times during our river trip, and I assume a small sum was paid to the owner, plus we bought cold drinks. No matter where you are, it seems Coke, Fanta and Sprite can be purchased, plus the local yellow-green Inca Cola. Afterwards we strolled down the street to the City Square, which was completely covered in *Oxalis*, not grass! It was here that we spotted a Yellow-browed Sparrow and a pair of Blue-black Grassquits. But the Chestnut-fronted Macaws made it special. Our first macaws. “Welcome to Amazonia” said Ian.



Blue and Yellow Macaw

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 Pearson, David L. and Beletsky, Les. 2008, *Travellers' Wildlife Guides: Peru*. Interlink Publishing Group, Inc., Northampton, Massachusetts.
 Schulenberg, Thomas S., et al. 2007. *Birds of Peru*. Princeton University Press, Princeton and Oxford.
 Wust, Walter H. 200? – no date. *el vuelo del Condor / the flight of the Condor*. CondorTravel.

Part III See April FieldNatter

Australian National Botanic Gardens Lunchtime Talks

(12:30 – 1:30 pm, Thursdays, February to November)

The Australian National Botanic Gardens (ANBG) Lunchtime talks are held every Thursday in the Theatre opposite the bookshop. Forthcoming talks are:

4 March	Bill Stevens	<i>Bloomin' Showbiz</i>
11 March	Roger Farrow	<i>Flowers of Tibet</i>
18 March	Paul Scrannell	<i>Albury Children's Garden</i>
25 March	Chris Cargill	<i>Cryptogams: What they are, their role in nature and their exploitation</i>
Also of interest 14 March 2:00pm	Attila Kapitani	<i>Australian Succulents: lesser known and intriguing plants</i>

Ancient plant remains help us understand our East Timorese neighbours - Part 2

Among archaeological evidence recovered, marine shellfish are most conspicuous suggesting their importance during the Holocene and the late Pleistocene. The presence of two shell fishhooks at Lene Hara - one dated 10,782 – 10,476 years BP (Before Present) and the other 7501 – 7294 years BP – in association with remains of pelagic fish species suggest fishing in the open sea was part of the East Timorese way of life from early on.

In 2005 significant scatters of marine shellfish remains still covered the ground around the village of Osso Ua/ Uaisa. Thinking that these could still be gathered from the nearby coastal zone the attempt to collect some modern shellfish proved unsuccessful. This resource has since been exhausted.

The only native mammals present in pre-pottery layers at excavated sites were large rodents and bats.

There is now evidence that cuscus (*Phalanger orientalis*) has been back to about 10,000 to 8000 BP. According to Heinsohn (2005) the cuscus remains represent a significant find, suggesting some level of contact between populations in East Timor and New Guinea or the Moluccan Islands, from where this species must have been translocated at this early time.



Cuscus Photo:

<http://www.belden-arts.com/gallery.htm>

Other domesticated animals entered the archaeological sequence more or less at the same time as pottery and came, in contrast, from presumably Asian sources (pig, dog, goat/sheep, civet cat and macaque).

Earth ovens

Earth ovens – a “quintessentially Melanesian form of cooking” – found in East Timor from early- to mid-Holocene reinforce ideas of early eastern contacts. In Timor they now seem to predate the oldest known evidence for similar structures in New Guinea, where presumably they originated. In the Pacific, where they

are still widely used, earth ovens are a preferred cooking technique for tubers and tree pith.

A Continuum of Practices

The suggestion that agricultural practices in this part of the world had their roots in the Pleistocene seems to be strongly confirmed in East Timor. The absence of marked changes in the archaeobotanical record of East Timor across the pottery introduction boundary suggest plants, pots and other expressions of culture do not necessarily travel together. We find pottery and domesticated animals in sites throughout the region without clear signs of cereal agricultural practices. The distinction between horticulture and agriculture should be disregarded.

A pattern of plant resource exploitation emerges - one overlooked in much of the literature. This has to do with the presence of a range of tree crops, usually considered as wild resources and not credited with their rightful value. The debate around the search for the origins of cereal agriculture is the main culprit. Cereal agriculture in Southeast Asia and elsewhere is just a later addition to a continuum of previously in-place and much older plant management practices.

Lessons for the Future

The understanding of past plant management practices is fundamental to addressing economic opportunities in the country. Some 80% of East Timor’s people today survive on subsistence agriculture. Domesticated animals are seen chiefly as an asset and exchange good. They are mostly consumed during ritual occasions. A large part of the economy relies on a diverse array of agricultural crops that include trees, nuts and tubers present for several thousand

years. Except for those plant species only introduced after the 16th century and cash-crops of increasing importance such as coffee, current agricultural practices represent a unique *modus vivendi* that is possibly “an anachronism in today’s world”.

With little more than a million people and a fragile economy (despite rich but non-renewable fossil fuel resources), East Timor needs to look to the future without disregarding an agricultural knowledge that is an intrinsic part of its culture. That ancient agricultural knowledge, together with the use of caves and rock shelters, has in the last 30 years regained a central place in East Timor. The Timorese Resistance used many such places as shelters. They also fed from the resources existing in the forest. In this sense, caves and rock shelters are seen today as “monumental landmarks in the nation’s history”. They should take a central place in the country’s narratives, both as past cultural expressions and as relevant knowledge for future generations.

See: <http://palaeoworks.anu.edu.au/Nuno.html>

**Dierk von Behrens, Canberra Friends of Dili;
vbehrens(at)grapevine.net.au**

Talk about population by Kelvin Thomson

<http://www.kelvinthomson.com.au/speeches.php>

Kelvin Thompson stated that Australia's population needs to be stabilised. Last year 285,000 migrants made Australia home - along with our natural increase our population increased by 440,000!

This is not sustainable.

An increasing population will put added pressure on Australia's natural environment and wildlife, including endangered species. Every extra person requires food, water, housing, transport etc. All our major cities already have water restrictions and shortages. This water is used to grow our food. A growing population requires extra space for housing and transport corridors and extra water and other resources, reducing our food productivity.

The Canberra Spatial Plan predicts a Canberra/Queanbeyan population of between 430,000 and 500,000 by 2032. Politicians talk as if an increasing

population is inevitable. It is not. Over half of last year's increase was immigration. We, as a community, decide how much immigration we can sustain.

http://apps.actpla.act.gov.au/spatialplan/1_future/1b_context/1b6_population.htm

Margaret Kalms

There is no human circumstance more tragic than the persisting existence of a harmful condition for which a remedy is readily available. Family planning, to relate population to world resources, is possible, practical and necessary. Unlike plagues of the dark ages or contemporary diseases we do not yet understand, the modern plague of overpopulation is soluble by means we have discovered and with resources we possess. What is lacking is not sufficient knowledge of the solution but universal consciousness of the gravity of the problem and education of the billions who are its victims.

Dr. Martin Luther King

Genetic Engineering of the Cane Toad?

Some points of interest from Hyatt, A. and Robinson, A.J. (2004). Biological Control of Cane Toads: February 26-27 2004 Brisbane Workshop Report for the Australian Government Department of the Environment and Heritage.

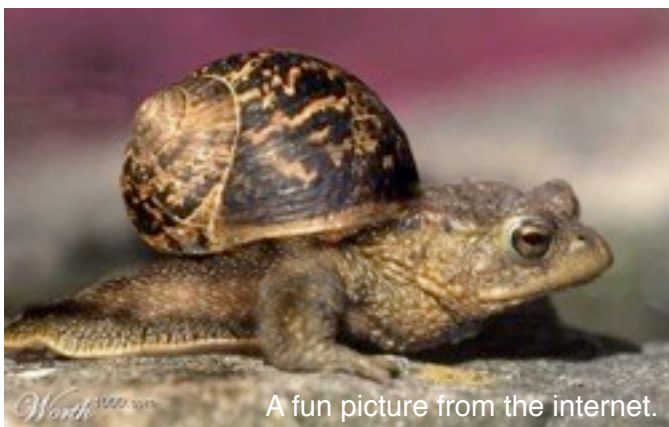
Since cane toads (*Bufo marinus*) were introduced in 1935, they have impacted adversely on native wildlife throughout its distribution. It occupies habitat and poisons predators. Some impacts have been;

- declines of seven of 21 monitored species of frogs in the Northern Territory.
- declines of goannas in Kakadu National Park.
- quolls became locally extinct within 12 months of the cane toads' arrival in Kakadu National Park.
- quoll populations have not recovered after 20 years in parts of Queensland!
- quolls have been translocated to offshore islands in order to ensure a population survives.
- bush tucker available to aboriginal communities in the Northern Territory have declined significantly.

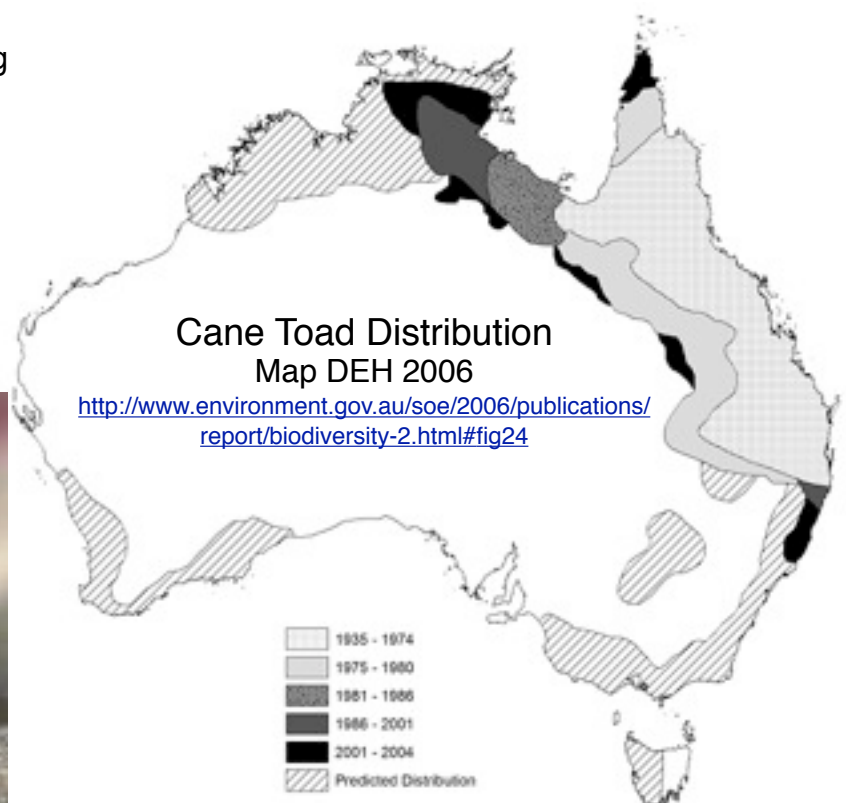
Scientists are researching biological control mechanisms to try to limit the toad's spread. These include the production of sterile males and daughterless technology. CSIRO is doing research on iridovirus that interferes with metamorphosis. Unfortunately there is the strong possibility of it also infecting other amphibians and aquatic life. More research is needed.

Cane toads are spreading at a rate of 27km per year (see map) and have the potential to impact extensively on Australian wildlife for decades to come.

It would be good if we could slow them down!
Margaret Kalms



A fun picture from the internet.



Who are the Field Naturalists?

The Field Naturalists' Association of Canberra (FNAC) was formed in 1981. Our aim is to foster interest in natural history by means of meetings and regular field outings. Meetings are usually held on the first Thursday of each month. Outings range from weekend rambles to long weekends away. Activities are advertised in our monthly newsletter. We emphasise informality and the enjoyment of nature. New members are always welcome. If you wish to join FNAC, please fill the member application below and send it with your subscription to the FNAC Treasurer, GPO Box 249 Canberra, ACT 2601:

President: Benj Whitworth, Ph:
Mob:

Secretary: Tony Lawson, Ph:
fieldnaturalist@yahoo.com.au

Website: Under construction.

Newsletter editor: Margaret Kalms margaret@ecospirit.com.au
Ph:

Published and distributed by Bob Lehman.



Monthly meeting venue: Division of Botany and Zoology, Building 116, Daley Rd, Australian National University. Park (occasionally at the adjacent Building 44).

Meetings start at 7:30 pm and are followed by refreshments.

MEMBERSHIP APPLICATION OR RENEWAL

Family name: First name:

If a family membership, please include the first names of other members of the family:

.....

Postal address:

Suburb: State: Postcode: Home phone:

Work phone: Email address:

Subscription enclosed: \$.....(Single/Family \$25) Donation: \$.....

How did you hear about FNAC? Please circle: FRIEND? OTHER? Please specify: